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INCREASE OF POPULATION IN MASSACHUSETTS.

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THE increase of population in any community is a question of very great interest. It involves important topics, such as the physical organization and condition of a people, their morals, their education, their civil institutions and future prospects.

There are two modes by which the population of a place or state may be increased:—1st, by an excess of births over deaths, or *natural increase;* and 2d, by the number emigrating into a place exceeding those removing out of it, or *increase by emigration.*

We propose here to examine briefly whether there has been an increase of population for a series of years in Massachusetts, and, if so, the character and extent of this increase.

The population of this State is reported by the United States census as follows:—In 1765, 222,563; in 1790, 378,787; in 1800, 422,845; in 1810, 472,040; in 1820, 523,287; in 1830, 610,408; in 1840, 737,700; in 1850, 994,514; and in 1860, 1,231,066. We here see that the increase for thirty years—from 1790 to 1820—was comparatively small, averaging 11 per cent.; that, from 1820 to 1830, the population increased over 16 per cent.; from 1830 to 1840, over 20 per cent.; from 1840 to 1850, 34 per cent.; and from 1850 to 1860, 24 per cent. During the first half of this period, large numbers emigrated from Massachusetts to other States, with scarce any return from these States, but during the latter half the population was increased not only by large numbers removing from other States into Massachusetts, but by the addition of a large foreign element.

It is alleged that the population of this State—particularly the American portion—has always been very much affected by removals to other States, to the West, to California, &c. In order to show how this matter stands, we here quote the results of two tables from the United States census of 1850 and of 1860. In 1850, there were residing in other States, natives of Massachusetts, 199,582; and in 1860, there were 241,039 such residents—an increase of 41,457

during these ten years. But in 1850, there were residing in Massachusetts 134,830 persons natives of other States; and in 1860, 165,403 such residents: that is, in 1850, there were 64,752 natives of Massachusetts residing in other States more than there were natives of these States in Massachusetts; and in 1860, this excess was 75,632 persons.

From 1850 to 1860, there was, then, a gain of only 10,880 persons in other States, emigrants from Massachusetts, over and above residents of this State who were born in other States. This averages only about 1000 each year emigrating from Massachusetts, according to the census from 1850 to 1860. But some allowance should be made for filling the places of the deceased natives of Massachusetts in other States during the space of these ten years. According to the usual rates of mortality, from three to four thousand persons would probably supply this number. It appears, then, that the whole number emigrating from Massachusetts to other States did not exceed annually from 1850 to 1860, five thousand persons. It should be remarked that a large majority of this emigration is made up purely of American stock, but the exact line here between the American and foreign cannot be drawn. By the census of 1850, and 1860, the whole increase of population was 236,552, and, of those born in a foreign land, it was 95,666. But the proportion of the whole increase, made up of a foreign element, is much greater than this number. The census for 1850 reports as foreign born residing in Massachusetts, 164,448, and in 1860, 260,114 such persons; it also distinctly states that all the children of foreign parentage born in this State are considered in the Report as natives of Massachusetts, and are there reckoned in the American column. The first Registration Report of Births, Marriages and Deaths that made a discrimination in the births as to parentage was that of 1850, returning 8,197 of this class and 3,278 mixed or not stated. In 1850, the foreign births were only one half as many as the American, but they continued to gain upon the American every year, till in 1860, when they exceeded 15,000, and constituted almost a majority in the State. From 1850 to 1860, the whole number of foreign births reported was 137,146, besides 18,598 not stated, the larger portion of which undoubtedly was of foreign origin. Then the number of such births from 1830 to 1850, cannot be definitely stated, but, judging by the amount of foreign population at this period and its fruitfulness at other times, the number of births would certainly come up to 50,000, or more. Now what proportion of those of this character born from 1830 to 1850, might have been living in 1850 when the census was taken, and helped to make up the American column, or to aid in the increase of this class from 1850 to 1860; or what proportion of those foreign-born in the State from 1850 to 1860 were living in 1860, when that census was taken, and were reckoned under the American head, we cannot tell; all that can be determined

upon the subject, is only an approximation to the truth. After making allowance for the usual mortality, and considering that by far the largest proportion of these births occurred in the years immediately preceding 1860, we think it perfectly safe to say that there must have been considerably over 100,000 persons of this class included in the census of 1860 returned as Americans, being born in the State. If to the number derived from this source be added the increase from 1850 to 1860 of those reported by the census as actually born in a foreign land, viz., 95,666, it will certainly go far towards making up the whole increase (236,552) in the population of the State from 1850 to 1860. In other words, it appears that the actual increase of the purely American portion of the population during this period was at least comparatively small, certainly for each year. But there are other modes of testing this question. The Registration Report for 1850 gives the whole births in Massachusetts as 27,664—American, 16,189; foreign, 8,197; not stated, 3,278. In 1860, it reports the whole births as 36,051—American, 16,672; foreign, 16,138; mixed, 2,411; not stated, 830. The American portion from 1850 to 1860 scarcely varies five hundred in any year, except in 1851 and '52; and in 1860 it only exceeds that of 1850 by 183. But the births reported of foreign parentage, it will be seen—commencing in 1850 with 8,197—have more than doubled in these ten years. The year 1860 returns the highest number of births in the State ever reported.

From 1860 the number has diminished till 1865, when we find 30,249 reported—American, 13,276; foreign, 14,130; mixed, 2,416; and not stated, 437. Here, it seems, the foreign lead the American by 854. This diminution of births from 1860 to 1865 is undoubtedly occasioned by the effects of the war.

It has been alleged that the births are not all reported. This was undoubtedly the case in the earlier years of collecting the materials for the Registration Reports, but, of late, there is reason to believe that this defect does not prevail to the same extent. The United States census for 1860 reports under one year of age in Massachusetts 31,312 persons. The Registration Report of the same year, of the State, returns 36,051 births and 4,821 deaths under one year of age, which leaves living (31,230) only 82 less than the census. These separate results were obtained by two distinct agencies and modes of collecting statistics, entirely different, so that there could be no collusion or repetition. The census taken in 1850 and in 1855 does not afford the materials for verifying this matter for those years. But suppose the births are not fully reported from year to year, the defect or omission would be more likely to occur with the foreign than with the American births.

The increase of population in the State for twenty or thirty years has been confined principally to cities and towns where manufacturing, mechanical and commercial business is carried on. In the purely

agricultural districts there has been but little increase of population; and wherever this increase has taken place, it is found on examination to be made up largely of a foreign element, either from emigration or by the great number of births. It is a fact now pretty well established that the foreign class will have on an average about three times as many children as an equal number of the American.

On the other hand, if we take the counties or towns where there has been but little increase of population, we find that they are made up mostly of American stock. In fact, a careful analysis of the Census Reports at different periods, shows that this increase of population in the State follows almost invariably in the same line, and in the same proportion, as the foreign element has been introduced or increased.

But there is another mode of examining this question. How stands the number of deaths compared with the births? The Registration Report for 1864 gives 30,449 births and 28,723 deaths; for 1865, 30,249 births and 26,152 deaths; making only 1,726 births in 1864 more than the deaths, and 4,097 more in 1865. Now since the foreign population have two or three times as many children as the same number of married persons among the Americans—and having a majority of the births in the present case, and composing only about one third of the population of the State—is it not very evident that the strictly American deaths exceed the births? In examining the Registration Reports, it appears that the counties containing the least foreign population return, in 1864 and '65, more deaths than births. Take the towns containing none or scarce any foreign population, where in 1864 and '65 not a single birth is reported (there are over thirty such towns in the State), and the whole number of deaths in these towns for 1864 and '65, exceed each year the births. On the other hand, an examination of those cities and towns containing a large foreign element, shows that the whole number of births there invariably exceeds the deaths.

There is a difficulty in discriminating in the Registration Reports between the deaths of Americans and of foreigners, since the deaths of all those of foreign origin born in this country are understood to be returned as Americans. This mode of reporting the deaths is unfortunate where it is desirable to ascertain the *natural* increase of population in the two classes separately. Still, very correct knowledge upon this subject can be obtained in any city by a careful examination of the books of the undertakers, the Superintendent of Burials, and of the City Clerk, together with the places of burial. In the cities of Lowell and Lawrence, where there is a very large foreign element, we have obtained from these sources the exact number of deaths, foreign and American, for 1864 and '65, and the number of deaths in the former city over the births were rising one hundred each year, and in Lawrence, for the two years, they were over one hundred.

In a report upon the comparative view of the population of Boston in 1849 and '50, made to the city government, November, 1851, Dr. Jesse Chickering, after a most careful analysis of the births and deaths in Boston, states that "the most important fact derived from this view, is the result that the whole increase of population arising from the excess of births over deaths for these two years, has been among the foreign population." Since 1850, we think it will be very difficult to prove that there has been any *natural* increase of population in Boston with the strictly American portion.

It may be said the force of the statistics from the Registration Reports of 1864 and '65 is very much impaired by the war. The births may have been somewhat diminished, and the deaths increased by such means, but then the foreign element would have been affected as well as the American, since it was largely represented in the war. But a similar state of things in reference to the increase of the two classes existed for years before the war, and there is abundant evidence to prove that for a long time there has been a relative decrease of births with the Americans. In the Colonial census of 1765, taken one hundred years ago, when the population was purely American, the total inhabitants were then 222,563, and the number under sixteen years of age returned as 102,489—almost one half of the whole population. Now, it is estimated that only about one third of our population is under fifteen years of age. According to this estimate, a careful analysis of the natural proportion of the children to each class will show that scarcely one fifth of the Americans are at the present time under sixteen years of age. This makes a surprising difference in the relative number of children of the same people at the two periods—1765 and 1865.

Again, many towns in the State have been settled over two hundred years, and their history will include from six to eight generations. The records of several of these towns have been carefully examined with respect to the relative number of children in each generation. It was found that the families comprising the first generation had on an average between eight and ten children; the next three generations averaged between seven and eight to each family; the fifth generation about five, and the sixth less than three to each family. What a change as to the size of the families since those olden times! Then large families were common, now the exception; then it was rare to find married persons having only one, two or three children, now it is very common; then it was regarded a calamity for a married couple to have no children, now such calamities are found on every side of us—in fact, they are fashionable!

Two general remarks should here be made. 1st. That this decrease of children is found to prevail in country towns and rural districts almost to the same extent as in the cities, which is contrary to the general impression. 2d. From the bills of mortality of the present day it is an established fact that, on an average, only about

three fifths of all persons born, including the city and the country, ever live to reach adult life. It will be seen at once that with this rate of mortality, if the deaths exceed every year the births, or are only slightly less, the children will not keep the original stock good in point of numbers. In view of these facts, several questions naturally arise:—If the foreign population in Massachusetts continues to increase as it has, and the American portion remains stationary, or decreases, as the probabilities indicate, what will be the state of society here twenty-five, fifty, or a hundred years hence? How long will it be before the foreign portion will outnumber the American in our principal cities and towns, or constitute even a majority in the whole Commonwealth?

The cause why there should be such a difference in the number of children, between the American families now upon the stage and those of the same stock one, two and three generations ago, is a subject of grave inquiry. Again, why should there be such a difference in this respect between American families and those of the English, German, Scotch and Irish of the present day, and living, too, in our own State? Is this difference owing to our higher civilization or to a more artificial mode of life? Or can it be attributed to a *degeneracy in the physical condition and organization of females, or a settled determination with large numbers of the married to have no children or a very limited number?*

According to the late Registration Reports of England, the births exceed every year the deaths by more than one third, notwithstanding an emigration is going on much larger than what exists in Massachusetts, besides, too, large numbers of young men are being constantly drafted for the army; whereas in France the number of births has been approximating nearer and nearer to that of the deaths, so that the present population of that great nation is almost stationary.

Why should the strictly Americans of New England, descendants of the English, and similar in all the essential features of character, still rather resemble, in the matter of births, the French—a people so unlike the Americans in all their history, character and institutions?

Whatever difference of impression or opinion these questions may at first produce, a thorough discussion of the whole subject will probably lead every one to similar results. The members of the medical profession cannot fail to be interested in this matter. If this state of things has been brought about in any respect by the violation of the laws of life and health, is it not the solemn duty of this profession, as the guardians of these laws, to expose their violation, and vindicate, to woman as well as to man, the laws of Nature and of God?

EXSECTION OF THE SUPERIOR MAXILLARY BONE—PLASTIC DENTISTRY.

By F. I. Cummins, M.D., of New York.

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A very interesting case in surgery and dentistry has recently come under the notice of both professions in this city. About the middle of last month a patient came to Dr. J. M. Carnochan, suffering from disease of the upper jaw, resultant on the unskilful extraction of defective teeth about eight years ago in Australia. Since that time, the patient, having been out of the reach of the best practitioners, had passed through all the stages of ulceration, sloughing and caries, until at the period of his coming to Dr. Carnochan his masticatory power had been entirely, and his speech nearly destroyed. Dr. Carnochan proceeded to exsection of the upper maxillary, and found the parts so far gone that he was obliged to remove the entire structure from the articulation with the lower jaw (leaving the articulation perfect) upon the right side, to within a distance of three molars from that upon the left. The destruction of the soft parts had created an aperture through the floor of the antrum by which the forefinger could be passed into the fossæ, and the perpendicular plate of the ethmoid was plainly visible. The case was then handed over by Dr. Carnochan to Dr. George H. Perine, of 22d St., a dentist, well known as former editor of the *New York Dental Journal*, as a skilful manipulator, and the discoverer of several very ingenious methods and appliances in dentistry. Dr. Perine undertook the difficult task of restoring the jaw, beginning by making, in the first instance, a hypothetical mould as near the contour of the cavity as was possible by the eye alone, and through successive castings and adjustments finally succeeding in adapting a vulcanite rubber base, which, with the artificial teeth attached to it, perfectly replaced the missing parts.

The aperture through the floor of the antrum greatly complicated the difficulties to be overcome, rendering the suction upon which the artificial maxilla depended for its retention *in situ* so defective, that it was absolutely necessary to close it before the adhesion of the vulcanite could be relied on. The preliminary castings as well as the permanent structure had to be carried up through the floor, and as the aperture necessarily increased upwards, the resistance to the removal of the cast unbroken was an obstacle which it required much ingenuity to overcome. Dr. Perine effected the removal by causing the patient to hold his breath, at the same time blowing into his nostrils with the full force of his own lungs, while an assistant steadily pulled at the cast below.

In seven weeks from the date of Dr. Carnochan's operation, the patient was wearing the artificial jaw and teeth (a permanent set, at least until further absorption renders some re-adjustment necessary) without pain or discomfort. The attachment was perfect, and the

power of mastication was entirely restored, as well as vocal articulation and the contour of the features. The most intimate friends of the patient, not previously informed of the substitution, met him constantly without a suspicion of the change which had occurred since he went to Australia. In view of all the facts, this case, which up to the present date (Nov. 30th) remains in *statu quo*, is one of the most remarkable combined triumphs of surgery and dentistry.

New York, November 30th, 1866.

Bibliographical Notices.

Eléments de Pathologie Interne et de Thérapeutique (*Principles of Internal Pathology and Therapeutics*). Par Niemeyer, Professor de Pathologie de Tubingue. Translated into French by Drs. L. Culmann and Ch. Sengel (of Forbach), with Notes by Dr. V. Cornil, and an Introduction by Prof. Behier. Volume Second. 8vo. Pp. 919. Paris. 1866.

[Read before the Norfolk (Mass.) District Medical Society, November 14th, 1866, by Z. B. Adams, M.D. of Roxbury, and communicated for the Boston Medical and Surgical Journal.]

This volume concludes the work of Niemeyer, and is of about the same dimensions as the first volume, an excellent review of which was read before this Society in January last, by Dr. Weld, of Jamaica Plain (see this Journal, vol. lxxiv. p. 20).

As an elementary book, or manual, this work enjoys a high reputation in Germany, where it has already passed to a sixth edition in the course of four or five years.

"It will serve," says Prof. Béhier in his introduction, "to show us how our German neighbors, in treating of Internal Pathology, seek to avail themselves of the numerous researches made by their countrymen in physiology, and in histology, normal and abnormal."

It is indeed a remarkable and valuable work, giving as it does, in a condensed yet readable form, all the truly important facts in relation to disease which modern German investigation has brought to light. It is not sought always to explain these facts, yet, as a general rule, they are explained, or if not, the various theories that have been proposed by authors being stated, Niemeyer contents himself with saying that these rest upon hypotheses requiring confirmation, or simply that our knowledge upon the subject is still incomplete. Our author is not so fanatical in his own views, nor in those of others, as to force facts to bend to false theories. He has liberality enough to perceive the numerous contradictions which facts insufficiently observed, or too hastily generalized, are sure to present.

The book, in its general tenor, is eminently practical, seeking to draw from every phenomenon of disease some useful application. It is at once a readable, entertaining and instructive work. Of course it is somewhat difficult to judge of the style of an author from translation, but the graphic pictures of the clinical phenomena of disease given in these volumes deserve to make the work a classic. Particu-

larly would we mention the descriptions of typhoid fever and of cholera in this volume.

It is curious to note, in the introduction by Prof. Béhier, that he finds occasion, in speaking of this work, to combat a prejudice among his countrymen, which exists also among us, against the study of minute pathology. Nothing, perhaps, could better illustrate the fact that we keep equal pace in science on both shores of the Atlantic.

Prof. Béhier says, that there are two classes of objections brought against this method of medical study, or denying the value of information derived from such a source.

There are some who ask, "What can be learned from minute physiology, and all these delicate experiments? Of what real advantage to us is the study of histology?"

"No!" says Béhier, "however useless, however unreasonable they may seem, we have no right to reject these facts. No one is authorized in saying, *non de minimis curat prætor*.

"Besides, is it true that microscopic chemical analysis only shows us unimportant facts and trivial details? This kind of research, discreetly conducted and thoroughly performed, seems to me to permit us to demonstrate the most secret properties of tissues, and to throw light upon the true character of certain very profound organic processes. By widening the circle of investigation, and thus multiplying our means of comparison, we arrive with greater certainty at a more thorough and perfect knowledge of the laws which govern many of the acts of the economy.

"It ought to be clearly set forth that the more enlightened we become, the more it is our duty to examine every fact, and not reject any because special preparatory study is requisite to properly appreciate and appropriate the labors from which a knowledge of such fact has been derived. We might as well be Chinese and enclose ourselves in a great wall."

The other objection is brought by those who pride themselves on being practical men. They say, "Vous, vous faites de la science. Bien! mais nous, nous sommes praticiens."

"Practical men!" exclaims Béhier. "How is it possible that there should exist any practice without science? Settling down into a practitioner of this sort, a man can never advance. He who is content to ruminate over and over the same cud, will soon find his mouth empty. No, no! we cannot, without being to the last degree culpable, reject without examination any scientific fact asserted by other observers."

In his preface, the author says:—"The reader cannot find in this book any new principles of diagnosis nor new methods of cure. It treats simply of those phenomena of disease which the analysis of numerous observations has led us to recognize as the most constant and most essential symptoms. As for treatment, I have mentioned only those means and medicines which have received the sanction of practical experience."

Yet it is not merely a *résumé* of older and more extended treatises, "for the reader will readily see that the end in view has been to employ recent physiology to explain the facts of pathology and therapeutics, and to show how the symptoms necessarily result from the disease."

The author often acknowledges his indebtedness to Virchow, and occasionally introduces Doctor of Philosophy Maurice Traube, whose views he not seldom differs from. Referring to the labors of Traube, Romberg, Frerichs, and others, he points to their success in the same direction that he has chosen, and says that, seeing what they have achieved, he can lay claim only to "the honor of being the first to present within the narrow limits of a manual all of pathology and therapeutics applicable to the purpose in view."

In pursuit of this plan, the usual introductory chapters are omitted, and the history, bibliography, symptoms, &c., of each disease are left to be gathered from more extended treatises. There is little or no quotation. Neither are cases related in detail, the author briefly citing, chiefly from his own observation, such facts as seem to elucidate disputed points.

Under "Treatment" he does not enumerate all the remedies that have been vaunted in each affection, but restricts himself to such as he has himself tested, or to those which he believes the experience of others in whom he places confidence has proved.

He refers "Fever" and "Inflammation" to the domain of General Pathology, and does not treat of them.

In mooted questions, such as the explanation of physical signs for instance, he gives only his own views, and enters into no discussion with those who differ from him, always in the design of making the book as concise and clear as possible.

Everything belonging to the field of external pathology is left to Surgery. Diseases not met with in Germany are not treated of. Poisons and mental disorders are omitted as not coming within the scope and object of the work.

Some no doubt will be ready to find fault with the author's classification. If it may be said to have any basis it is pathogeny, due regard being paid to the ensemble of symptoms. In the present state of our knowledge, such a classification must be to a certain extent arbitrary or theoretical. We are not yet prepared to decide whether all diseases acknowledge the same morbific origin, or if there be a separate poison for each and every disease, or again if there be certain classes or groups of diseases arising from the same source and others from different sources. If we classify diseases according to symptoms, the march of Pathology destroys the system; if according to Pathogeny, the classification must be in a great measure speculative. To examine morbid phenomena and to explain their mode of production is clearly the conscientious endeavor of Niemeyer, and not to compel diseases to enter within the imaginary lines of an arbitrary classification. Thus the author is left free to approach the facts, to examine and explain them in the full light of modern physiology and pathogeny, with an unbiased mind.

As has already been said in the review of the first volume, our author presents diseases in the order of Organs. In this volume we have, 1st, Diseases of the Urinary Organs; then, of the Genitals; next, of the Nervous System; of the Skin; of the "Organs of motion" (including under this class, Rheumatism, Gout, Rachitis, Muscular Atrophy, etc.) Lastly, we have Constitutional Affections. And here the classification seems arbitrary. Niemeyer says, "I have given the name "Constitutional Affections" to the diseases considered in the fol-

lowing Sections, in contradistinction to 'Affections of Special Organs,' which I have thus far described, and have chosen this name because from its wider signification, it seems to me preferable to that of 'Dyscrasies,' 'Cachexies,' or 'Blood diseases,' which I at first intended to apply to these disorders."

Under this head there are classed, 1st, Acute Infectious Diseases, namely: Measles, Scarlatina, Variola, Vaccinia, Varicella, Typhus and Typhoid Fevers (i. e. T. petechialis and T. abdominalis), Asiatic Cholera and Dysentery.

2d. Chronic Infectious Diseases, namely: Syphilis, and Infectious diseases derived from animals, as Glanders and Hydrophobia.

3d. General Anomalies of Nutrition without Infection, namely: Chlorosis, Scurvy, the Hemorrhagic Condition or Werlhof's Disease, the Hemorrhagic Diathesis (Bluterkrankheit), Scrofula and Diabetes.

One is at a loss to see why Acute *Contagious* Diseases should be excluded from the first of these categories; why certain skin diseases should be excluded from the second; and why, under "General anomalies of nutrition, without infection," we should have Scrofula and not Cancer, Diabetes and not Gout, the hemorrhagic condition and Chlorosis, and not Melanæmia nor Leukemia.

Nor does the author enlighten us much as to the grounds of his classification. Let us look at Gout, for instance, by the side of Diabetes. To state it in general terms, in Gout we have the accumulation in excess in the blood of a normal product of decay of tissue, to wit: Uric Acid. In Diabetes, we have the excessive accumulation in the blood of a normal product of digestion and of the Liver, to wit: Sugar. "But we do not know," says Niemeyer speaking of Gout, "whether the uric diathesis be the primitive and essential disease, or if it be not intimately associated with, perhaps the result of, other and more important anomalies of the blood. Neither do we understand the disturbances of nutrition which produce an excess of uric acid, nor do we know what prevents the proper elimination of this substance, whether its accumulation be the result of excessive production on the one hand, or of retention on the other." Can we in our present state of knowledge say much more or less than this concerning Diabetes?

[To be continued.]

A Practical Treatise on the Physical Exploration of the Chest, and the Diagnosis of Diseases affecting the Respiratory Organs. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College and in the Long Island College Hospital; Fellow of the New York Academy of Medicine, &c. Second Edition, revised. Philadelphia: Henry C. Lea. 1866.

The interval of ten years which has passed since the first edition of this valuable work was published, has added much to the author's experience and given him ample opportunity and abundant materials for improvement of and addition to it. This he has well availed himself of, and the work before us has consequently been to a considerable extent re-written. He has constantly kept in view the great importance of a clear and comprehensive exposition of the science of physical exploration of the thorax, while he has aimed at giving the study as practical a character as possible by avoiding all unnecessary complication and over-refinement.

The author claims to have added important means of diagnosis in the case of certain signs, by indicating in connection with them the great value of the pitch of the sound in determining its true character. In this way he shows that bronchial or tubular respiration may be easily distinguished from cavernous respiration; prolonged expiratory sound not caused by solidification of the pulmonary tissue from that produced by this cause; puerile from rude respiration; bronchophony from increased vocal resonance; pectoriloquy caused by solidified lung from that which indicates a cavity; and in numerous other instances by attention mainly to this sign he claims to be able to settle doubtful questions which are often of extreme significance. Our own experience confirms his statements in some of these instances, and all auscultators will welcome his suggestions as of much practical value. Various other features, such as signs from the *whispered voice*, give novelty to this work. Throughout, the author goes upon the only safe ground of arguing from physical signs to actual conditions, and not by the reversed process of inferring certain physical conditions from preconceived theories. Dr. Flint's descriptions of the phenomena of thoracic exploration are clear and intelligible, and his analysis of physical signs is thorough and exhaustive, without becoming tedious and merely speculative. He is conversant with all the recent theories connected with his subject and give them due consideration. As a whole, his work must take a permanent place in the front rank of authorities in the science of physical exploration. The present edition is handsomely printed, on good paper, in clear, large type.

Clinical Observations on Functional Nervous Disorders. By C. Handfield Jones, F.R.C.P. London; Physician to St. Mary's Hospital, &c. Philadelphia: Henry C. Lea. 1867.

In an overtaxed community like ours, in which the various disorders arising from exhaustion seem to be constantly increasing, a practical work like the one before us, from so distinguished a source, must be eagerly welcomed. The author is not inclined to give the theory of self-limitation in disease a very wide application, and says that he is "more and more convinced that we ought not to think of diseases as uniform entities, but as varying and inconstant pathological conditions."

In discussing his subject, the points which he specially indicates as most worthy of attention are, "the recognition of primary paresis of nervous centres, and its distinction from reflex paralysis, the numerous illustrations of vaso-motor nerve disorder, the theory of inhibitory action, the remarkable affinity between paralysis, spasm, anæsthesia and neuralgia, the different quality of nervous disorder apparently of the same kind in different instances, the intimate relation of neuralgia in most instances to debility, and the importance of an accurate adjustment of remedies to each individual case."

The author is very forcibly impressed with the great importance at the present day of giving more attention to the *modus operandi* of remedies and thus gaining a more thorough mastery of them, and hopes that the profession may adopt some plan of united action by which the many questions in this department of therapeutics may be defi-

nitely settled. We are inclined to the view that such action would narrow the domain of medical skepticism not a little.

In thirty-eight chapters, Dr. Jones discusses the multiform varieties of nervous disorder, and in the thirty-ninth the remedies employed in their treatment. The work is enriched by numerous condensed abstracts of cases, which are very instructive. It is a very valuable contribution to practical medicine.

Practical Therapeutics, considered chiefly with reference to Articles of the Materia Medica. By EDWARD JOHN WARING, F.R.C.S., F.L.S., Surgeon in Her Majesty's Indian Army. From the Second London Edition. Philadelphia: Lindsay & Blakiston. 1866.

As notwithstanding the skeptical or philosophic tendencies of the present day we have not yet reached the point where we are prepared to burn all our books on Materia Medica, and trust alone to the *vis medicatrix*, with the collateral aids of hygiene and nursing, we must expect that the press will give birth from time to time to new works on the therapeutic uses of drugs. Too often such works present little substantial claim to notice on account of any special value belonging to them; but the work before is one which really does offer, in its plan and arrangement, to say nothing of its other merits, features specially deserving of commendation. In the first part the object of the author was to present in a concise form a scientific description of the drug, its medical properties and action, the principal officinal preparations, and finally its therapeutic uses. It is to this last item that he has devoted particular attention, and it is this which gives his work its peculiar value. Take for instance, opening the book at random, Iodinium. Under the head of Therapeutic uses we have no less than fifty-eight distinct paragraphs giving an account of its use in so many distinct diseases or phases of disease, quoting the authorities for its use in each, with foot notes containing full references to volume and page of the writer quoted. Each paragraph is numbered from the beginning of the book, and the alphabetical arrangement has been adopted for greater convenience, most wisely as we think, no attempt having been made at classification.

The second part is a manual of Practical Therapeutics, and treats of the therapeutic action not merely of drugs, but of the action of other agents used in the treatment of disease, such as electricity, baths, counter-irritation and the like. The whole concludes with two copious Indices; the first of Diseases, in which under each the various remedies which have been employed in its treatment are catalogued and referred to by the number of the paragraph in which they are mentioned; and the other an Index of medicines and curative agents. Nothing can be more convenient than the whole arrangement of the book, and the author has carried out his plan with remarkable patience and thoroughness. It is based on the British Pharmacopœia, but this is not so materially different from that of the United States as essentially to detract from its value. We know no other work which compares with it as a work for reference to the busy practitioner. It is printed in elegant style, and as a whole we most cordially recommend it to our readers.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 3, 1867.

REPORT OF THE SURGEON-GENERAL.

The Annual Report of Surgeon-General Joseph K. Barnes, Brevet Major General, U.S.A., to the Secretary of War, for the year ending July 1, 1866, has been published, and contains interesting information relative to the establishment of the Medical Department of the Army upon a peace footing and to its past career of usefulness. The system of General Hospitals, Hospital Transports and Ambulance Corps has been dispensed with, hospital supplies have been sold, and provision for the sick and wounded has been made in Post Hospitals, of which there are 187, with a total capacity of 10,881 beds.

The amount disbursed during the year for artificial limbs for disabled soldiers was $198,999, and in connection with this subject the report says:—

"The appropriations for supplying artificial limbs to maimed soldiers, so largely increased the number of inventors and manufacturers that it was found necessary for the protection of the Government, as well as of the soldier, to convene from time to time Medical Boards composed of experienced officers, with instructions to examine all models submitted, subjecting them to the severest tests of durability, usefulness and comfort, upon patients in hospitals. The models of twenty-three (23) manufacturers of artificial limbs and apparatus for resections, having been recommended by these various boards, were adopted, and Medical Directors authorized to give orders to those applicants who were entitled thereto upon either of these they might elect. In addition, Medical Directors were instructed to require satisfactory evidence of delivery of the limb or apparatus so ordered, and its suitableness and workmanship, before approving accounts for payment. Despite all precautions, however, it has been found impossible to secure in every instance useful and well-fitting limbs. In many cases the urgency of the applicant or the interest of the manufacturer has acted injuriously in adapting limbs before stumps had entirely healed, or the enlargement resulting from inflammation had subsided, and re-opening of wounds, or shrinking of stumps, with consequent inability to wear the limb provided by Government, have resulted. In other cases manufacturers, although guaranteeing to supply upon Government order, at a stated price, limbs fully equal to those submitted to the Boards, have furnished an inferior article or have extorted from the soldier an extra payment for some fancied or nominal improvement. In all such cases coming to the knowledge of this Department measures have been taken to protect the soldier, and punish the criminal party by requiring the defective limb to be replaced, or the overcharge reimbursed, under penalty of entire withdrawal of Government orders.

"From date of Act of Congress (July 16, 1862) authorizing artifi-

cial limbs to be furnished, to July 1, 1866, there have been supplied by this Department, to maimed soldiers, three thousand nine hundred and eighty-one (3,981) legs; two thousand two hundred and forty (2,240) arms; nine (9) feet; fifty-five (55) hands; one hundred and twenty-five (125) surgical apparatus, and it is estimated that not more than one thousand (1000) limbs remain still to be supplied, at a cost probably of seventy thousand dollars ($70,000). Should the appropriations for this purpose be continued, it is recommended that, upon furnishing the evidence now required to obtain an artificial limb, the applicant receive, from a Medical Disbursing Officer, under such regulations as may be prescribed by the Secretary of War, its present established money value in lieu of an order upon a manufacturer. Such an arrangement would include those cases in which, from the nature of the injury and operation, no limb or (surgical) appliance can be advantageously adopted, by extending to them the same allowance now made to their more fortunate fellow-sufferers."

With reference to cholera, of which two army surgeons have died, among only six deaths in the medical staff during the year, the report goes on to say:—

"Early during the present year, grave apprehensions of the appearance of Asiatic cholera as an epidemic were justified, and March 3d, 1866, I had the honor to recommend, for the protection of our troops on the Southern Atlantic seaboard, that a rigid quarantine be established, and sanitary precautions enforced, where necessary, by military authority.

"The adoption of these measures has thus far been crowned by more than ordinary success, and although the disease has appeared at the recruiting dépôts and forts in New York Harbor, at Tybee Island, Ga., Galveston, Texas, Forts Jackson and St. Philip, La., Newport Barracks, Ky., Jefferson Barracks and St. Louis Arsenal, Mo., Carlisle Barracks, Pa., and Vicksburg, Miss., it has been controlled, kept in check, or entirely eradicated, before assuming its usual alarming epidemic form. I have already reported for your favorable consideration the names of certain medical officers to whose skilful administration, untiring zeal and energy these results, by which the horrors of a widely spread pestilence have been averted, are attributable. With the above exceptions, the general health of the troops has been good."

The average mean strength of white troops for the year was 100,133, and the proportion of deaths to cases treated was 1 to every 52. The strength of the black troops was 53,541, among which the amount of sickness was greater than with the former, and the mortality rate 1 to every 29 cases treated. There were in the hospitals at the beginning of the year and subsequently admitted 64,438 patients, of whom at its end but 97 remained under treatment.

Our readers will be pleased to learn that arrangements are completed for the transfer to a fireproof building of the Army Medical Museum, and all the valuable mortuary records connected with the Department, including "sixteen thousand (16,000) folio volumes of Hospital Registers, forty-seven thousand (47,000) Burial Records, and sixteen thousand (16,000) Hospital Muster and Pay Rolls, and Alphabetical Registers of the Dead containing two hundred and fifty thou-

sand (250,000) names of white, and twenty thousand (20,000) of colored soldiers, compiled from them.

"During the year official evidence of cause of death, or of discharge for disability, has been furnished the Pension Bureau in twenty-six thousand five hundred and eighty-nine (26,589) cases; Paymaster General, eight thousand (8000) cases; Adjutant General, ten thousand six hundred and twenty-three (10,623) cases; Authorized Agents, four thousand (4000) cases, making a total of forty-nine thousand two hundred and twelve (49,212) cases.

"This information, obtainable from no other source, has been of the greatest importance in the settlement of the claims of discharged soldiers and of widows and orphans, and in a majority of the cases is ample and satisfactory. In addition to the above, two hundred and ten thousand and twenty-seven (210,027) discharges upon certificate of disability, have been examined and classified.

"The total number of surgical cases classified and recorded is, 'of wounds,' etc., one hundred and thirty-three thousand nine hundred and fifty two (133,952), and of 'operations' twenty-eight thousand four hundred and thirty-eight (28,438).

"The preparation for publication of the Medical and Surgical History of the War has been prosecuted with energy, much of the manuscript and several of the illustrations for the first volume being completed. The Army Medical Museum continues to increase in value and usefulness, and the greater security and additional accommodations of the building to which it will be shortly removed admits of the addition of a great number of interesting and instructive specimens not hitherto available for want of space.

"A small appropriation will be required to continue the work of classification and preservation of this national collection."

The doings of a Medical Board convened in New York for the examination of candidates for positions in the Medical Staff and of Assistant Surgeons for promotion, and the changes which have taken place during the year, are thus stated:—

"Ninety-eight (98) applicants were invited to present themselves, of which number nineteen (19) were fully examined, found qualified, and approved; seventeen (17) withdrew before their examinations were concluded; thirty-one (31) were rejected, and thirty-one (31) failed to appear.

"Twenty-three (23) Assistant Surgeons, U. S. Army, were examined for promotion, twenty (20) of whom were found qualified; two (2) reported for re-examination, and one (1) disqualified.

"Their services being no longer required, one hundred and seventeen (117) Surgeons and Assistant Surgeons of Volunteers have been mustered out of service, since my last Annual Report. One (1) killed by Indians.

"In the Medical Staff, U. S. Army, there have been twelve (12) resignations; six (6) deaths, two (2) by Cholera, one (1) by accident, and three (3) from disease.

"Fuller returns than those embraced in the Report of 1865, give the number of casualties from commencement of the war to present time, in the Regular and Volunteer Medical Staff, as three hundred and thirty-six (336), viz.:

"Killed in battle, twenty-nine (29); killed by accident, twelve (12); died of wounds, ten (10); died in rebel prison, four (4); died of yellow fever, seven (7); died of Cholera, three (3); died of other diseases, two hundred and seventy-one (271); making a total of three hundred and thirty-six (336).

"During the war thirty-five (35) Medical Officers were wounded in battle.

"The distribution of troops in small bodies over so large an extent of country, necessitates the employment of Acting Assistant Surgeons temporarily, but the number of these has been reduced from one thousand nine hundred and ninety-seven (1,997), on July 1, 1865, to two hundred and sixty-four (264) on July 1, 1866, and will be still farther diminished when existing vacancies in the grade of Assistant Surgeons, U. S. A., created by the Act of Congress of July 28, 1866, are filled. A corresponding decrease in the number of Hospital Stewards, for general service, has also been effected, and in every branch of this Department, reduction and retrenchment have been rigidly enforced."

Connected with the report is an interesting statement in full of the quantities of all the medical supplies issued during the war, the grand total of which expressed in figures is immense, and a few items of which may be given by way of illustration:—Acaciæ pulvis, 1,050,580 oz; acidum sulphuricum, 657,896 oz; ætheris spiritus nitrici, 1,688,943 oz; *æther fortior*, 987,687 oz; *chloroformum*, 1,588,066 oz; copaiba, 1,292,129 oz; ferri chloridi tinctura, 690,682 oz; lini pulvis, 521,554 lbs; morphiæ sulphas, 29,828 oz; opii pulvis, 448,804 oz; opii tinctura, 901,467 oz; pilulæ opii, 442,926 doz; potassii iodidum, 514,064 oz; pilulæ quiniæ sulphat., 178,050 doz; quiniæ sulphas, 723,521 oz; spiritus frumenti (whiskey) in 32 oz bottles, 2,430,785 bottles.

If our readers are curious to know what books were most valued by the Medical Department and Army Surgeons, they will learn this by examining the following list, which contains the number of copies supplied:—

"Gray's Anatomy, 3,442; Power's Surgical Anatomy (of arteries), 3,895; Fownes's Chemistry, 1,640; Dunglison's Medical Dictionary, 1,905; Webster's English Dictionary, 617; Wood & Bache's Dispensatory, 4,850; Hygiene, 3,100; Beck's Jurisprudence, 1,062; Bedford's Midwifery, 537; Virchow's Pathology, 893; Parish's Pharmacy, 1,333; Dalton's Physiology, 1,412; Watson's Practice of Medicine, 3,254; Bennett's Practice of Medicine, 1,542; Hartshorne's Principles of Medicine, 1,237; Erichsen's Principles of Surgery, 5,370; Stephen Smith's Principles of Surgery, 3,251; McLeod's Surgical Notes, 905; Guthrie's Commentaries, 781; Minor Surgery, 2,671; Stillé's Therapeutics, 1,026; Longmore on Gun-shot Wounds, 1,178; Jones on Diseases of the Eye, 576; Toynbee on Diseases of the Ear, 575; Wilson on Diseases of the Skin, 476; Bumstead on Venereal Diseases, 7,317; Woodward's Hospital Steward's Manual, 3,239."

The report closes with a statement that models of U. S. General Hospitals, with all the improved equipments, are to be sent to the Paris Exposition, and with the following well-merited compliment to Secretary Stanton:—

"It is a matter of just pride and congratulation to the medical pro-

fession throughout the civilized world, that your deep interest in the health and hygienic condition of the army, your constant vigilance and most liberal assistance in all that could in any manner conduce to the greater comfort and welfare of the sick and wounded, and your official recognition of faithful and meritorious service by Officers of this Department, have been responded to on their part by redoubled exertions, unfailing devotion to duty, and an *esprit du corps* that secures to it professional talent of the highest order. Letters from the most eminent Surgeons and Physicians in Europe, in acknowledgment of publications from this Office, do not express more astonishment at the magnitude of the war, than admiration of the unvarying support and encouragement extended to the Medical Staff under your administration of the War Department."

Diphtheria and Croup ; Differential Diagnosis.—(From Dr. GAILLARD'S Prize Essay on Diphtheria.)

Diphtheria.	*Croup.*
Disease of the blood ; a toxæmia ; a constitutional disease, with local manifestations.	Not a disease of the blood ; a local disease, with constitutional manifestations.
Blood primarily affected ; sometimes there are no local manifestations.	Blood, if at all, affected secondarily ; local manifestations invariable.
First exhibits itself in the fauces, locally.	Locally, first exhibits itself in the trachea.
Commences always above the rima glottidis.	Commences always below the rima glottidis.
Does not extend below the rima glottidis, unless complicated with croup.	Never extends above the rima glottidis.
Asthenic disease ; constitutional symptoms primary ; local symptoms secondary.	Sthenic disease ; local symptoms primary, and constitutional symptoms secondary.
Depression often manifested without dyspnœa.	Depression not often manifested before dyspnœa.
Contagious.	Not contagious.
Not peculiar to any age.	Peculiar to infancy and childhood.
Respiration not affected, unless the disease extends downwards ; dyspnœa not a prominent symptom.	Impaired and difficult respiration always a prominent symptom ; often the chief symptom.
No cough, unless croup supervenes.	Cough almost invariably present.
The membranous exudation of fibrin always commences above the rima glottidis.	The membranous exudation of albumen always commences below the rima glottidis.
Exudation only extends below as a complication.	Exudation never extends above.
Occasionally there is a cutaneous eruption.	There is never a cutaneous eruption.
Epidemic chiefly, and seldom sporadic.	Sporadic and never epidemic.

Swelling of the lymphatic glands behind the jaw frequently occurs.	Swelling of the lymphatic glands behind the jaw never occurs.
Duration, one to three weeks, with sequelæ.	Duration never beyond the 11th day (Cragie); no sequelæ.
Exudation fibrinous.	Exudation albuminous.
Dyspnœa rare, and when present, uniform.	Dyspnœa common and invariably spasmodic.
Dyspnœa not produced or increased by deglutition.	Dyspnœa frequently caused and increased by deglutition.
Invades at all hours.	Invades chiefly at night.
Not caused by cold or dampness.	Generally caused by cold and dampness.
Prognosis grave; mortality severe.	Prognosis generally good; mortality slight.
Antiphlogistic treatment injurious.	Antiphlogistic treatment curative.
Tracheotomy contra-indicated and generally forbidden; no constitutional resiliency.	Tracheotomy indicated and advised; constitutional resiliency very decided.
Sequelæ — paralysis, strabismus, amaurosis, &c.	No sequelæ.
Fœtor of the breath constant and great.	Fœtor of the breath generally absent.
"Dissolution of the blood;" loss of its coagulating power.	"Dissolution of the blood" never seen; increase of its coagulating power.
Constitutional symptoms precede the local.	Local symptoms precede the constitutional.
Membranous exudation always present (as a rule) and always seen; present as the rule.	Membranous exudation seldom present and never seen; present as the exception.
Exudation thick, buff colored; coriaceous.	Exudation thin; not buff colored; not coriaceous.
Membrane renewed as the rule.	Membrane renewed as the exception.
Death, when disease is uncomplicated, from asthenia.	Death from apnœa.
Sound of the cough moist and sonorous.	Sound of the cough sonorous and metallic.
Convalescence slow, unreliable, and complicated with the sequelæ of the disease; interrupted.	Convalescence easy and uniform; no sequelæ; uninterrupted.

MEDICAL INTELLIGENCE.

The Paris Faculty of Medicine as now constituted consists of the following temporary staff of professors:—Gavarret, Medical Physics; Racle (substitute for Andral), Pathology and General Therapeutics; Jarjavy, Anatomy; Wurtz, Medical Chemistry; Denonvilliers, Operations and Apparatus; Monneret, Medical Pathology; Richet, Surgical Pathology; Robin, Histology; Bouillaud, Bucquoy (substitute for Guillot) and Fournier (substitute for Grisolle), Clinical Medicine; Houel (substitute for Jobert), Laugier, Velpeau and Nélaton, Clinical Surgery; and Depaul, Clinical Midwifery.

The Minister of Public Instruction has announced his intention of immediately filling the vacant chairs, and requests all candidates to send in a statement of their claims and qualifications. Some of the French Journals recommend the re-establishment of the *concours*, of which M. Guérin says, "it is not fitted either to render justice or to lead to the discovery of truth in the regions of elevated science; it is a means, rather, for bringing into prominence merits of a secondary order—information, memory, and the talent for exposition; but it excludes all superiority and originality."

A fossil human parietal and frontal bone has just been found in Alsace in a stratum of clay of quarternary epoch, in company with bones of a small horse, a bison, and elephant.

The use of Burnett's disinfecting fluid has been officially discontinued in the British Navy from the fact that several fatal cases of poisoning have occurred by its having been accidentally swallowed by seamen. Carbolic acid has been substituted for it.

Discovery of a Mammoth.—At a late sitting of the Academy of Sciences a letter was received from M. de Baer, of St. Petersburg, announcing that a mammoth, still covered with its skin and hair, had been discovered in the frozen soil of Arctic Siberia. This discovery had been made in 1864 by a Samoyede in the environs of Taz Bay, the eastern branch of the Gulf of Obi. The news only reached St. Petersburg towards the end of 1865; but as the bodies of large animals will keep a long while in those regions, if they are not completely uncovered, and as this mammoth was still inclosed in the frozen soil, the Academy of St. Petersburg has, with the aid of the Russian Government, sent M. Schmidt, a distinguished palæontologist, to examine the animal and its position in the locality. It is hoped M. Schmidt will arrive before the decomposition is too far advanced, and that a correct notion may be obtained of the outer appearance of the animal, and also, from the contents of the stomach, of its natural food. The pre-historical figure of the mammoth drawn on a piece of ivory, found in a cavern of Périgord by M. Lartet, will then admit of verification.—*American Journal of Pharmacy*, from *Foreign Journal.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 29th, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	32	44	76
Ave. mortality of corresponding weeks for ten years, 1855—1865	40.1	40.7	80.8
Average corrected to increased population	00	00	89.03
Death of persons above 90	1	0	1

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 29th, 76. Males, 32—Females, 44. Apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—bronchitis, 2—cancer, 1—consumption, 15—convulsions, 1—croup, 4—debility, 3—diabetes, 1—diarrhœa, 1—dropsy, 2—dropsy of the brain, 1—dysentery, 1—scarlet fever, 2—typhoid fever, 1—gastritis, 1—disease of the heart, 2—infantile disease, 6—intemperance, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 10—cerebro-spinal meningitis, 1—old age, 1—premature birth, 1—rheumatism, 1—smallpox, 1—spina bifida, 1—suicide, 2—unknown, 5—whooping cough, 1.

Under 5 years of age, 26—between 5 and 20 years, 5—between 20 and 40 years, 21—between 40 and 60 years, 15—above 60 years, 9. Born in the United States, 49—Ireland, 19—other places, 8.